

**SYSTEMS AND METHODS FOR MODELING CREDIT RISKS OF PUBLICLY  
TRADED COMPANIES**

**Abstract of the Invention**

5        There are provided new structural default models for modeling the likely default of publicly  
traded companies. In a first embodiment, the invention is straight-forward to implement and  
allows the capture of some important ingredients of the actual default, including positive short-  
term CDSs. In a second embodiment the model is somewhat more versatile and complex.  
10        Provided is a very efficient method for dealing with the timing of a default boundary, that is,  
jumps in the company's value, etc. Further provided is a process using Fast Fourier Transform  
matrix processing for processing the structural default models in a computationally efficient  
manner.